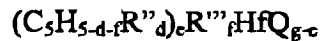


-3-

phosphorous and nitrogen atoms containing radical bridging two ($C_5H_{5-6-f}R''_d$) rings, or bridging one ($C_5H_{5-6-f}R''_d$) ring to Hf; each Q which can be the same or different is selected from the group consisting of hydride, substituted and unsubstituted hydrocarbyl having from 1 to 30 carbon atoms, halogen, alkoxides, aryloxides, amides, phosphides and combination thereof; two Q's together form an alkylidene ligand or cyclometallated hydrocarbyl ligand or other divalent anionic chelating ligand; where g is an integer corresponding to the formal oxidation state of Hf, d is 0, 1, 2, 3, 4, or 5, f is 0 or 1 and e is 1, 2, or 3, and the polymer product has a melt index less than 0.1 dg/min (ASTM D-1238-F or ASTM D-1238-E) without the addition of hydrogen to the process.

73 ~~52~~. (three times amended) A process for polymerizing [ethylene and one or more alpha-]olefin(s) excluding cyclic olefin(s) [comonomer] in the presence of a catalyst system comprising a hafnium transition metal metallocene catalyst having at least one cyclopentadienyl ring substituted with at least one alkyl group selected from group consisting of n-propyl, isopropyl, isobutyl and n-pentyl, and an activator.

53. (twice amended) A continuous gas phase process for polymerizing [ethylene and one or more alpha-olefin(s) excluding cyclic olefins [comonomer] in a fluidized bed gas phase reactor in the presence of a catalyst system to produce a polymer product, the catalyst system comprising a bulky ligand hafnium transition metal metallocene catalyst represented by the formula:



wherein $(C_5H_{5-6}R''_d)$ is an unsubstituted or substituted cyclopentadienyl ligand bonded to Hf, wherein at least one $(C_5H_{5-6}R''_d)$ is substituted with at least one R'' which is an alkyl group selected from the group consisting of n-propyl, isopropyl, isobutyl and n-pentyl, each additional R'' , which can be the same or different is hydrogen or a substituted or unsubstituted hydrocarbyl having from 1 to 30 carbon atoms or combinations thereof or two or more carbon atoms are joined together to form a part of a substituted or unsubstituted ring or ring system having 4 to 30 carbon atoms, R''' is one or more or a combination of the group consisting of carbon, germanium, silicon, phosphorous and nitrogen atoms containing radical bridging two $(C_5H_{5-6}R''_d)$ rings, or bridging one $(C_5H_{5-6}R''_d)$ ring to Hf; each Q which can be the same or different is selected from the group consisting of hydride, substituted and unsubstituted hydrocarbyl having from 1 to 30 carbon atoms, halogen, alkoxides, aryloxides, amides, phosphides and combination thereof; two Q's together form an alkylidene ligand or cyclometallated hydrocarbyl ligand or divalent anionic chelating ligand; where g is an integer corresponding to the formal oxidation state of Hf, d is 0, 1, 2, 3, 4, or 5, f is 0 or 1 and e is 1, 2, or 3, and the polymer product has a melt index less than 10 dg/min (ASTM D-1238-F or ASTM D-1238-E) without the addition of hydrogen to the process.

REMARKS